

REMARKS

Claims 7-11 are pending in the present application. Claim 7 is currently amended to more clearly define “backing up database files” as requiring “completely rewriting said database data file to a backup system.” While applicant submits that this limitation is intrinsic in the term “backing up” such amendment should preclude overbroad interpretation of the term “backing up” by the Examiner to include performing a restore operation or redoing failed transactions, for example.

Rejections Under 35 U.S.C. §103

Claims 7-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,499,367 to Bamford et al. (hereinafter “Bamford”) in view of U.S. Patent No. 5,970,488 to Crowe et al. (hereinafter “Crowe”). Claim 7, as amended, which is representative in part of the other rejected claims recites:

7. In a computer system having a plurality of nodes, each node having access to a shared common database and also having local storage, a method of performing a backup operation to completely rewrite said shared common database comprising:

providing a local archived redo log in local storage for said node, said node including information regarding data in said shared common database;

selecting at least one node of said plurality of nodes to perform said backup operation to completely rewrite said information regarding data in said shared common database included in said node;

obtaining information regarding a directory location of said local redo log for said at least one node;

setting said local redo log to be read/write accessible by said selected at least one node; and

backing up database data files, control files and archived redo logs in said shared common database by accessing data in said shared common database and also in said local archived redo log to provide backup data and completely rewriting said database data files to a backup system. (emphasis added.)

The Examiner maintains an overly-broadly interpretation of the claim term “backing up data” and continues to incorrectly assert that Bamford teaches “backing up data in said shared common database by accessing data in said shared common database.” Applicant respectfully

submits that Bamford discloses storing data in a shared common database and use of a distributed log to redo failed transactions to the shared common database. Bamford does not teach anything about backing up data in the shared common database by completely rewriting the shared common database.

To more clearly show that the claims require a “backing up of data” as opposed to redoing failed transactions, for example, claim 7 is currently amended to recite, among other things, “backing up of database data files... by... completely rewriting said database data files to a backup system.”

Applicant maintains that a prior-art system described by Bamford uses “a back-up copy of the contents of the database. The backup copy is a duplicate copy of the original database that is made periodically” (Col. 2, lines 23 – 26). “A recovery in a database system means recovery of the database itself. That is, restoring the database to a state that is known to be consistent and reasonably recent.” (Col. 2, lines 20 – 23). Since the backup copy may not reflect transactions that occurred after the time the backup was made and before the failure of the database system (col. 2, lines 28 – 30), a redo log is used to sequentially write short records containing information sufficient to redo the changes. (Col. 2, lines 33 – 41). Thus, in the background portion of Bamford, a prior-art redo log is first described for use with a back-up copy of the contents of an original database to provide a persistent backup/restore function with no local logs. In Fig. 2 of Bamford, a prior-art system is described with reference to local logs 208, 209 which did not include information in a shared common database.

Later in the background portion of Bamford, with reference to Fig. 1, the redo log is described for use in redoing a failed transfer of data between a cache buffer 107, 108, 109, 110, 111 or 112 and an [original] database 106 (col. 2, line 66 – col. 3, line 7) as opposed to a backup/restore function, with no mention of any back-up copy of the contents of the database.

Even if it is assumed for the sake of argument that Bamford’s redo log may be used for maintaining data persistence in both **restore** operations and in **redoing** a failed transaction between cache buffers and a shared common database, Bamford does not disclose backing up data in the shared common database at all, let alone **backing up data in said shared common database by accessing data in said shared common database and also in said local archived**

redo log to provide backup data and completely rewriting said database data files to a backup system as particularly claimed. Further, Bamford surely does not disclose or suggest “backing up database data files, control files and archived redo logs in said shared common database...” as Applicant particularly discloses and claims in amended claim 7.

The Examiner also incorrectly asserted that Bamford teaches “**obtaining information regarding a directory location of said redo log for said at least one node**” as particularly claimed. The Examiner cited “column 10, lines 23 – 59, and column 14, lines 3 - 9, wherein a log is located for the client).” Here Bamford describes log formats (col. 10, line 21 – col. 11, line 3), and a log manager (col. 14, line 4). Applicant respectfully submits that Bamford does not teach or suggest anything about a directory location of said redo log. It should be noted that obtaining directory information about the location of a redo log in a distributed system of redo logs as claimed is not trivial and is not taught or suggested by simply locating a log for the client.

Applicant respectfully submits that Crowe teaches backup via broadcast to a plurality of nodes wherein each database partially overlaps at least one of the other databases (Abstract) but does not teach or suggest backing up data in a shared common database. Applicant respectfully submits that Crowe does not cure the deficiencies of Bamford, and nothing in Crowe or Bamford combined teaches or suggests “**backing up database data files, control files and archived redo log in said shared common database by accessing data in said shared common database and also in said local archived redo log to provide backup data**” as claimed in amended claim 7, or “**obtaining information regarding a directory location of said redo log for said at least one node**” as claimed. Since no combination of Bamford or Crowe teaches or suggests each element of independent claim 7 as amended, Applicant respectfully submits that the rejections under 35 U.S.C. § 103 are overcome. Reconsideration is respectfully requested.

CONCLUSION

In view of the amendments and remarks set forth above, Applicant respectfully submits that the pending claims are patentably distinct and in condition for allowance. Authorization is hereby given to charge deposit account 50-2896 in connection with any fees or extension of time or any other fee that may be necessary to permit entry of this response.

The Examiner is invited and encouraged to telephone the undersigned with any concerns or requests in furtherance of the prosecution of the present application.

Respectfully submitted,

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